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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/769,908	01/25/2001	Naoki Matsuhira	FUJY 18.257	5311

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New York, NY 10022-2585

EXAMINER

SHEW, JOHN

ART UNIT	PAPER NUMBER
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2664

DATE MAILED: 07/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/769,908

Applicant(s)

MATSUHIRA ET AL.

Examiner

John L. Shew

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21 is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-11, 23-30 and 32 is/are rejected.
- 7) ☒ Claim(s) 8, 9, 12-20, 22 and 31 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01/25/01 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. New corrected drawings are required in this application because
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference character(s) mentioned in the description: Page 37 line 5 cites "IPv6 Header 52a", wherein FIG. 15 displays "IPv4 HEADER 45a".
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because
FIG. 19 reference character "85a" has been used to designate both the left side IPv4 HEADER and the right side IPv4 HEADER. From the disclosure page 40 lines 15-19, the left side IPv4 HEADER should be designated "85b".
FIG. 20 reference characters 91a and 91b designates "IPv4 HEADER"s. From the disclosure page 41 lines 15-18, reference characters 91a and 91b should designate "IPv6 HEADER"s.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should

include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Specification

1. The disclosure is objected to because of the following informalities:
2. Page 7 lines 8-9 are duplicates of lines 6-7. Latter lines should be deleted.
3. Page 9 line 10 cites "sowing" should be "showing".
4. Page 16 line 17 cites "link #b" should be "link #c".
5. Page 21 lines 5, 7, 16 cites "switch 17" should be "switch 5".
6. Page 21 line 16 cites "witch 17" should be "switch 5".
7. Page 21 line 24 cites "address 18b" should be "address 18a".

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8. Page 23 lines 14, 16, 22 cites "switch 23" should be "switch 5".
9. Page 23 line 21 cites "witch 23" should be "switch 5".
10. Page 28 line 6 cites "switch 31" should be "switch 5".
11. Page 39 line 13 cites "packet 9" should be "packet 79".
12. Page 46 line 5 cites "~ 11n" should be "~ 110n".
13. Page 48 line 3 cites "table 112" should be "table 111".
14. Page 48 line 18 cites "switch 113" should be "switch 5".
15. Page 50 line 25 cites "119" should be "5".

Appropriate correction is required.

Claim Objections

16. Claim 8 is objected to because of the following informalities:

Claim 8 recites the limitation "judging unit selects the dynamic route if the special information is written to the packet". Claim 1 upon which claim 8 depends does not disclose "special information". There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 7, 23-24, 29, 30 and 32, are rejected under 35 U.S.C. 102(e) as being anticipated by Galand et al.

Claims 1 and 23, Galand teaches a communication device for selecting a route of a packet (FIG. 3) referenced by the High Speed Packet Switching Node 300 which uses a Route Controller 305, comprising a static routing table storing first routing information of a packet based on static routing (FIG. 3, FIG. 5, page 5 column 1 paragraphs 0094-0095) referenced by Database 306 containing optimum route information based on network topology, a dynamic routing table storing second routing information of a packet obtained base on a dynamic routing protocol (FIG. 4, FIG. 9, page 8 column 1 paragraph 0201 column 2 paragraph 0209) referenced by the Trunk Adapter's Alternate Path Database including Dynamic Routing Table, and a judging unit obtaining the first and second routing information of the packet from said static routing table and said dynamic routing table (FIG.3, FIG. 4, FIG. 5, page 5 column 1 paragraph 0094) referenced by Route Controller 305 using link information from Topology Database and

Alternate Path Database to determine optimum packet path, if failure do not occur in a static route as a route corresponding to the first routing information obtained from said static routing table selecting the static route as a route to which the packet should be forwarded (FIG. 10, page 12 column 2 paragraph 0338) referenced by optimum Main Path connection for non-fault condition, and selecting if the failure occur in the static route a dynamic route as a route corresponding to the second routing information obtained from said dynamic routing table instead of the static route (FIG. 9, FIG. 10, page 9 column 2 paragraphs 0255-0256, page 12 column 2 paragraph 0338) referenced by the selection of an alternate path based upon the Alternate Path Database when a failure is detected on the main path.

Claims 2 and 24, Galand teaches a forwarding unit forwarding the packet to the route corresponding to a result of the selection by said judging unit (FIG. 3) referenced by Packet Switch 302 which forwards the packet based on the path determined by Route Controller 305.

Claims 7-8, 29 and 30, Galand teaches a writing unit (FIG. 3) referenced by Port 301, when transmitting a packet through the dynamic route to other communications device having the same construction as that of said communication device (page 4 column 2 paragraph 0085) referenced by generation of headers of packets formatted appropriately for the user protocol on the network, special information for said other communication device to select the dynamic route to the packet that should be

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transmitted (page 4 column 2 paragraphs 0085-0088) referenced by routing field and control field which contain special information used for routing. Galand teaches a judging unit (FIG. 3) referenced by Route Controller 305, selects the dynamic route if the special information is written to the packet (page 4 column 2 paragraphs 0086-0087) referenced by control fields for encoding identification of the protocol for interpreting routing fields.

Claim 32, Galand teaches a communications device for selecting a route of a packet (FIG. 3) referenced by the High Speed Packet Switching Node 300 which uses a Route Controller 305, comprising a first routing unit (FIG. 3) referenced by Route Controller 305, selecting a route for guaranteeing a communication quality of the packet (page 2, column 2 paragraph 0043) referenced by Path Selection Algorithm using quality of service parameters in network topology database, and a second routing unit (page 9 column 2 paragraphs 0250-0255) referenced by Alternate Path Manager, selecting a route for securing reachability of the packet (page 12 column 2 paragraph 0338) referenced by activation of an alternate path in the event of a path failure, the route of the packet is selected by use of one of said first routing unit and said second routing unit (page 5 column 1 paragraphs 0094-0095) referenced by use of the network Topology Database and not the Alternate Path Database for the optimal path, in accordance with a predetermined condition (page 5 column 1 paragraph 0094) referenced by the QoS specified by the user.

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-6, 10, 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galand et al. as applied to claims 1, 2, 7, 23-24, 29, 30 and 32 above, in view of Zheng et al.

Claims 3, 10 and 25, Galand teaches a system for path switching upon failure in a high speed network. Galand does not teach a packet containing a common search key. Zheng teaches a packet contains a search key common to a routing table (FIG. 13, FIG. 23, column 23 lines 32-35, 63-67, column 24 lines 4-8) referenced by the Destination Address 484 of the IP Header which is a parameter used for lookup in the Route Table 246, and said judging unit obtains the first and second routing information from routing tables (FIG. 27) referenced by the use of IP Header 560 inclusive of destination address is used by Lookup Element 550 from Lookup Array 564. The Lookup Element 550 performs an equivalent function of the Router Controller taught by Galand. The destination address is a common search key used in a multitude of routing tables

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inclusive of static and dynamic tables. Zheng teaches the packet contains an IPv4 Header (FIG. 23, column 16 lines 15-16) referenced by the IPv4 Header.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the destination address taught by Zheng as a common search key in the routing databases of Galand for the purpose of determination of quality of service in a possible route.

Claims 4-6 and 26-28, Galand teaches a system for path switching upon failure in a high speed network. Galand does not teach a first and second search key. Zheng teaches the packet contains a first search key and a second search key (FIG. 7, column 2 lines 50-54, FIG. 23, FIG. 18) referenced by IP over ATM where the ATM Cell's Virtual Channel Identifier 322 form the first search key and the IP Header's Destination Address 484 form the second search key, the judging unit (FIG. 13) referenced in two stages by ATM Lookup unit 220 and IP Route Lookup 244 obtains the first and second routing information by the use of the first and second search keys (column 21 lines 21-24, column 23 lines 8-16, 32-33, 59-67) referenced by lookup of routing tables using header parameters. The first search key is a virtual circuit information (FIG. 18) referenced by VCI 322. The second search key is a unique destination address (FIG. 23) referenced by Destination Address 484. Zheng teaches the packet contains plural pieces of virtual circuit information (FIG. 18) referenced by VCI 322 and VPI 320, a predetermined piece of virtual circuit information is used as the first search key (column

21 lines 21-24) referenced by lookup of routing tables using header parameters for Virtual Circuit inclusive of predetermined VCI 322 value.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the ATM Virtual Channel Identifier and IP destination address taught by Zheng as two search keys for searching in the topology database and alternate route database of Galand respectively for the purpose of determination of quality of service in a possible route.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Galand and Zheng. as applied to claims 1-7, 10, 23-27, 29, 30, 32 above, and further in view of Hamamoto et al.

Claim 11, Galand and Zheng discloses a system for path switching upon failure in a high speed network using a IPv4 header search keys. They do not disclose the use of IPv6 header information. Hamamoto teaches packets containing an IPv6 header (FIG. 24A) referenced by IPv6 Header Format. Hamamoto teaches a translation between IPv4 and IPv6 addressing (FIG. 4) wherein packets can interface between the two networks.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the use the IPv6 destination address as taught by Hamamoto in place of the IPv4 destination address of Zheng for the database search key for searching in the alternate route database of Galand for the purpose of determination of quality of service in a possible route.

Allowable Subject Matter

19. Claims 9, 12-20, 22 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

20. Claim 21 is allowed.

Citation of Prior Art


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Publication Number US 2004/0015590 A1, Nagami et al discloses a network interconnection apparatus with a high speed packet transfer method.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John L Shew whose telephone number is 703-305-8708. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 703-305-4366. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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